

CLAIMS

What is claimed is:

1. A notebook computer system, comprising:
 - a first heat sink to passively dissipate heat from the notebook computer system; and
 - a second heat sink coupled to the first heat sink, wherein the second heat sink is enabled if the notebook computer system detects that a component of the notebook computer system exceeds a predefined temperature threshold.
2. The notebook computer system of claim 1, wherein the first heat sink dissipates approximately 2-20 watts of power.
3. The notebook computer system of claim 1, wherein the second heat sink is enabled if the notebook computer system exceeds a predefined power consumption threshold.
4. The notebook computer system of claim 1, wherein the first heat sink passively dissipates heat through a display.
5. The notebook computer system of claim 4, wherein the display comprises a first plate coupled to a second plate, wherein a working fluid for heat transfer is distributed across the surface area of the display through grooves between the first plate and the second plate.
6. The notebook computer system of claim 5, wherein the grooves between the first plate and second plate has a plurality of turns to improve temperature spreading.

7. The notebook computer system of claim 6, wherein the first plate and the second plate are each approximately one millimeter thick.
8. The notebook computer system of claim 5, further comprising an insulation layer to protect display circuitry from heat emanating from the first plate and the second plate.
9. A method, comprising:
 - dissipating heat from a notebook computer system through a display of a notebook computer system; and
 - dissipating heat from the notebook computer system by using a fan to remove heat from a heat exchanger.
10. The method of claim 9, further comprising:
 - monitoring a power consumption of a central processing unit (CPU).
11. The method of claim 10, further comprising:
 - disabling the fan if the power consumption of the CPU is less than a predefined power threshold.
12. The method of claim 11, further comprising:
 - monitoring the display temperature.
13. The method of claim 12, further comprising:
 - enabling the fan if the display temperature is greater than a predefined temperature threshold.
14. The method of claim 9, wherein the display comprises a screen, circuitry, and a cover, wherein heat passively dissipates through the display cover.

15. A thermal management system of a notebook computer system, comprising:
- a heat generating component;
 - an evaporator coupled to the component to remove heat from the component, wherein the heat is transported via a working fluid; and
 - a pump coupled to the evaporator to transport the working fluid from the evaporator to a heat exchanger, wherein a fan removes heat from the working fluid in the heat exchanger; and
 - a display coupled to the evaporator, wherein the working fluid is spread across the surface area of the display to dissipate heat.
16. The thermal management system of claim 15, wherein the display dissipates approximately 2-20 watts of power.
17. The thermal management system of claim 15, further comprising:
- a hinge to transfer the working fluid from the heat exchanger to the display, wherein the hinge comprises flexible tubing.
18. The thermal management system of claim 17, wherein the hinge comprises metal tubing to provide a hermetic seal.
19. The thermal management system of claim 15, wherein the working fluid comprises water.
20. A thermal management system, comprising:
- means for cooling a notebook computer system passively; and

means for cooling the notebook computer system actively if a component of the computer system exceeds a threshold temperature.

21. The thermal management system of claim 20, further comprising:

means for detecting a temperature of the notebook computer system.

22. The thermal management system of claim 20, further comprising:

means for increasing a life of a battery of the notebook computer system.

23. The thermal management system of claim 20, further comprising:

means for spreading a working fluid temperature across a display of the notebook computer system.

24. The thermal management system of claim 20, further comprising:

means for pumping a working fluid through the notebook computer system.